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ZOOLOGY.

UNSEASONABLE VISITORS.—Monmouth County, New Jersey, has had an open Winter, and with it some interesting phenomena. Among the fishing industries, crabbing is one, of which there are two seasons—the special and the general, the former being when the crabs are shedding their shells, and are known as shedders or soft-shells. In this condition they are considered a great luxury, and bring the highest prices. But the soft-shells only have a short season. The hard shells continue the year through, except in the winter, when they betake themselves to the mud. A shrewd fisherman found out that the crabs this Winter in Raritan Bay had not taken to the mud; so he continued to catch them, and owing to their good condition, and the unusual fact of getting them in the Winter, he got good prices. It was in vain that the man tried to keep his secret. It leaked out, and there was a rush which soon closed the business.

The common eel, also, in the Winter, hides in the mud; but the fishermen have continued to catch them in these parts this Winter.

In February, some men while clearing pine land with the grubbing hoe, at a depth of five or six inches, unearthed a nest of snapping turtles—*Chelydra serpentina*. There were four young ones, just out of their shells, the latter lying in the nest. They were soft, though frozen stiff. One told the other to handle them carefully, or the legs would break off. Taken to the house they soon thawed, and became very lively, but being kept through the night in a room without fire, they succumbed to the cold, and died. As these young reptiles usually do not appear until Summer, I was a little puzzled at this premature hatching. The fact too, that they could not endure the cold, after being once warmed, should have some significance.

About the middle of March we had our only real snowstorm, the fall being some six inches. It only lasted three or four days, but ere it had quite gone four snakes came out of the ground at Keyport. They varied in length from sixteen inches to two feet, and formed one company. My informant told me that he “went for them,” but that the two largest got away into the bushes. From his description it is probable that they were garter snakes, but however innocent, or even useful, a

snake in the popular creed is "a varmint with no right to live."

On the 22d of March a fine male specimen of the giant bug, *Belostoma grandis*, was also caught in Keyport. The *quid nuncs* of the town were greatly exercised over the "huge cockroach!" One man, however, who "knew it all," said he had "lots of them roaches, only not nigh so big, in their kitchen." In my experience, this is a very untimely occurrence of this fine insect, and the specimen was in excellent condition. The bug is bred in the water, issuing thence in the imago state generally in the Summer, and flying in the night. I have received a number of specimens from Asbury Park, and Trenton, which had been killed by dashing against the electric lamps. —*Samuel Lockwood.*

THE POISONOUS ARACHNIDA OF RUSSIA.—At a recent meeting of the Dorpat Naturalists' Society, Professor Kobert spoke of the reputedly poisonous spiders of Russia. According to the observations of Dr. Walter, of Jena, *Galeodes araneoides* is not poisonous, and does not even possess poison-glands. *Trophosa singoriensis*, the Russian Tarantula, is not poisonous to warm blooded animals, although it is to lower animals. In the case of *Latrodectes 13-guttatus* not only the poison-glands but all parts of the body contain an unformed protoplasmic poisonous ferment, which has much the same physiological effect when injected into the circulation as cyanic acid and strychnine.

NEW ORGANS IN THE COCKROACH.—Mr. Edward A. Minchin describes (*Quar. Jour. Micros. Sci.*, December, 1888) an ectodermal organ in the cockroach, which may possibly be a stink-gland. It consists of a pair of involutions of the cuticle on the dorsal surface of the abdomen, between the fifth and sixth segments, and opening by means of two slits near the median line, which are usually covered by the posterior margin of the fifth segment. Internally each pouch is lined by a chitinous cuticle, bearing numerous branched hairs, and beneath them glandular epithelial cells.

ZOOLOGICAL NEWS—MOLLUSCA.—J. I. Peck (*J. H. U. Circ.*, No. 70) describes the anatomy of the Pteropod *Cymbulopsis calceola*, which he studied by means of serial sections.

In the same place, Mr. S. Watase records a remarkable phenomenon in the segmentation of the egg of *Loligo pealii*. He

was successful in artificial impregnation and in tracing the histories of the various segmentation planes. The first plane is longitudinal, and for many stages an alternation of rest and activity on the opposite sides of this plane is noticeable. Thus at one time almost every nucleus on the left side shows distinct mitosis figures, while not a single nucleus of the right side exhibits such a feature. This was witnessed again and again, until the blastoderm contained 116 cells.

CRUSTACEA.—Professors W. K. Brooks and F. H. Herrick describe (*J. H. U. Circ.*, No. 70) some features in the development of the Peneid form *Sergestes hispidus*. It escapes from the egg as a protozoa, passes soon to the true zoea stage, and then to a mastigopus condition.

GENERAL.—Dr. H. V. Wilson gives an account (*J. H. U. Circ.*, No. 70) of the times of breeding of several marine forms at the Bahamas, which will prove of value to students visiting the West Indies.

WORMS.—Dr. Hurst records (*Notes from Leyden Museum*, January, 1889) the presence of *Arenicola cristata* (originally described by Stimpson from South Carolina) at Naples.

EMBRYOLOGY.

THE ORIGIN AND MEANING OF SEX.¹—My hypothesis respecting the origin and meaning of sex may be stated provisionally as follows, pending a fuller sketch to be published in the immediate future.

1. Over-nutrition is regarded as the prime cause of the un-

¹ Seventeen paragraphs, or those numbered 1, 2, 8, 9, 12 to 18, 21, 22, and 25 to 28, of this article comprise all except 154 words, *verbatim et literatim*, of the first draft of a synopsis of the hypothesis here somewhat more fully presented. The Secretary of the Academy of Natural Sciences, of Philadelphia, advised the withdrawal of that first draft, which was offered for their *Proceedings*, on the ground that it was unwarrantably anticipated by the publication of the same matter in a supplementary notice, which was privately published by the author, with the same title, dated July 5, 1889, and which also forms part of the present article. This note is necessary in order to correct any possible erroneous impression which may have arisen in the minds of those to whom copies of extras were sent of the first article, as to the latter's source, as it was printed, in advance of the issue of the signatures of the Academy's *Proceedings*, and bore the imprint of the latter.